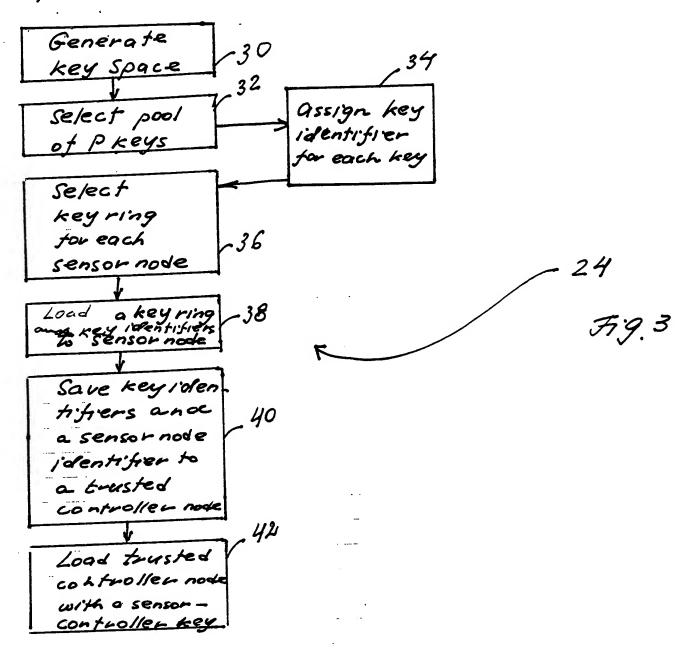


Key pre-distribution Deployment Shared key discovery Path - key establishment Revocation 62 Re- keying

Fig. 2

Initialize
pre-distribution
phase



Deploy the sensor nodes
over the terrain under scrutity
Initialize shared-key assurely phase

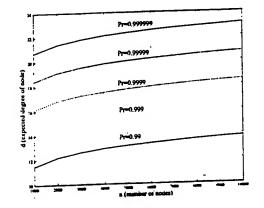
Broadcasting
key refer tifiers 44
and sensor node
refer the sensor node
shoring a key
shoring a key
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sensor node as
sensor node as
extrablish communic link therefores

50

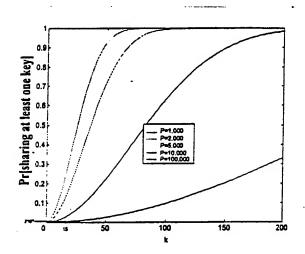
Broad costing of revocation message containing a signed list of key Identifiers of the key ring of a compromizedsensor Generating a signature key and unicasting to each sensor node at each sensor node, verifying the signature of the signed list with the signature key are locating the identifiers of the keys compromized removes the compromised beys from me key ring reconfiguring the links of the sensor nodes affected fy removal of compromised sensor node Re-starting the shared key discovery phase for the affected sensor nodes path - key establishment Fig. 4 phase

	Re-keying initialization		
_			62
	Removal of the expired key from all key rings	1	
64	key from all key rings		
, , ,			
	Shared key discovery phase 26		
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	Path-key establisment phase 28		
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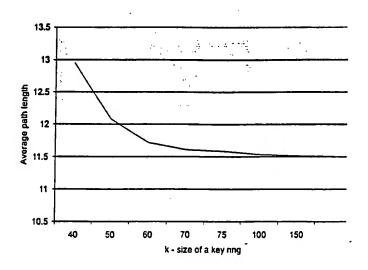
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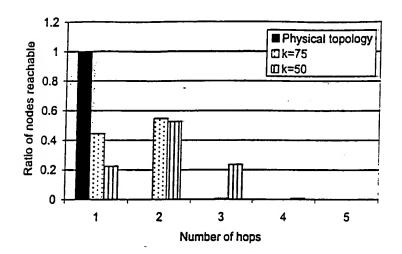


Fi.9.6

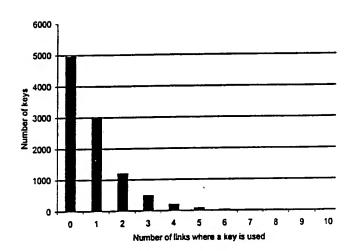


F19.7





F19. 9



Fr.9.10